ABSTRACT

A system that provides live television programming to passengers by integrating direct broadcast satellite services into an in-flight aircraft entertainment system. The present invention is a satellite television system that has an antenna disposed on the aircraft that is pointed at a plurality of satellites that are part of a direct broadcast satellite system. The antenna is controlled by an antenna controller and antenna interface unit that send control signals and process status signals to steer the antenna. The antenna is steered to lock it onto RF signals transmitted by the satellites. The antenna interface unit downconverts the received RF signals to provide left hand circularly polarized RF signals and right hand circularly polarized RF signals that contain different sets of television channels. The downconverted RF signals are processed by a receiver/decoder that decodes them to provide video signals corresponding to different television channels. The video signals for the different channels are routed to an video and audio distribution system on the aircraft which distributes live television programming to the passengers. A low-cost single channel receiver/decoder version of the system is also disclosed that provides a single channel of television programming to overhead monitors in an aircraft.